

IN THE CLAIMS

1. (Cancelled) A method for developing applications comprising a visual development environment for developing said applications, the visual development environment comprising a library of templates and components and a drag-and-drop interface to said library;

providing a process for building said applications that separates aspects of the applications to include data sources, processes and presentations to client devices; and providing an application descriptor output based upon predetermined standards to enable said applications to be executed on different computer systems.

2. (Cancelled) The process of claim 1 further comprising encapsulating portions of said applications and constructing the applications such that said portions can be selectively and dynamically enabled.

3. (Cancelled) The process of claim 1, wherein said computer systems are selected from the group consisting of internet-enabled desktop systems, wireless cellular telephones, smart telephones, PDAs, and voice phones.

4. (Currently Amended) A method for executing [[an]] a multi-channel application capable of operating over a plurality of channels in a multi-channel system having a plurality of subscribers, said method comprising the steps of:

identifying each subscriber with a unique identifier which is independent of a subscriber device running said multi-channel application;

presenting each subscriber with a personalized interface;

journaling transactions and memory objects during interaction with a subscriber such that upon the subscriber being disconnected during a session the subscriber is uniquely identified upon reconnection to the multi-channel application; and

presenting to the subscriber an option to continue execution of the multi-channel application from a previous point of execution prior to the subscriber being disconnected.

5. (Previously Amended) The method of Claim 4 wherein said journaling comprises:
 - storing threads of execution of a subscriber during execution of an application; and
 - recalling said stored threads of execution upon a subscriber reconnecting to the application following the subscriber being disconnected.
6. (Previously Presented) The method of Claim 5 wherein the threads of execution are stored within a session, which is associated with a unique identifier.
7. (Previously Presented) The method of Claim 4 further comprising the step of presenting to the subscriber an option to begin a new transaction.
8. (Previously Presented) The method of Claim 4 further comprising the steps of:
 - receiving subscriber requests;
 - detecting subscriber requests that are out of sequence; and
 - providing appropriate responses to subscriber requests that are out of sequence.
9. (Previously Presented) The method of Claim 8 wherein the step of detecting out of sequence subscriber requests includes:
 - tracking the sequence number of each request by use of a counter variable.
10. (Previously Presented) The method of Claim 4 wherein the step of presenting each subscriber with a personalized interface includes:
 - detecting device types associated with subscriber devices; and
 - presenting content to the subscribers that is optimized for the associated subscriber devices.

11. (Previously Presented) The method of Claim 10 wherein the step of presenting content to the subscribers includes:

translating application templates to specific markup languages associated with the device types; and

communicating the translated application templates to the subscriber devices.

12. (Previously Presented) The method of Claim 11, wherein the device types are selected from the group consisting of internet-enabled desktop systems, wireless cellular telephones, smart telephones, PDAs, mobile computers, pagers, laptops, and voice phones.

13. (Currently Amended) A system for running multi-channel applications capable of operating over a plurality of channels comprising:

an application manager that is adapted to run multi-channel applications capable of operating over a plurality of channels, to receive requests from clients to access the multi-channel applications, and to execute the multi-channel applications in response to the requests; and

a presentation manager that is adapted to detect device types associated with client requests, and to generate output to the clients that is formatted for the detected device types.

14. (Previously Presented) The system of Claim 13 wherein the presentation manager includes:

a device detection subsystem that is adapted to detect device types based on parameters of client requests; and

a view executor that is adapted to generate content optimized for the detected device types.

15. (Previously Presented) The system of Claim 14 wherein the device types are selected from the group consisting of internet-enabled desktop systems, wireless cellular telephones, smart telephones, PDAs, mobile computers, pagers, laptops, and voice phones.

16. (Previously Presented) The system of Claim 13 further comprising:
at least one session data object, which is maintained by the system, and which is used by the system to store client transactions during execution of an application, and to recall said client transactions upon a subscriber reconnecting to the application following the subscriber being disconnected.
17. (Previously Presented) The system of Claim 14 further comprising:
means for managing out of sequence client requests.
18. (Currently Amended) The system of Claim 17 wherein the means for managing [[our]] out of sequence client requests is adapted to receive client requests, detect client requests that are out of sequence, and provide appropriate responses to out of sequence client requests.
19. (Previously Presented) The system of Claim 18 further comprising:
means for determining whether a client request for a state in an application must be authorized.
20. (Currently Amended) A system for developing, running and analyzing multi-channel applications capable of operating over a plurality of channels, comprising:
a development module which is adapted to allow a developer to visually design a multi-channel application capable of operating over a plurality of channels;
a runtime system which is adapted to operate the multi-channel application capable of operating over a plurality of channels; and
a data mining module which is communicatively coupled to the runtime system and which is adapted to monitor client usage of the runtime system.
21. (Currently Amended) The system of Claim 20, [[21]] wherein the data mining module is adapted to determine all paths traversed by clients within the multi-channel application and to generate reports based on client usage of the runtime system.

22. (Previously Presented) The system of Claim 21 wherein the development module includes:

a first module adapted to allow a developer to visually design workflow for a multi-channel application;

a second module adapted to allow a developer to design views for the multi-channel application; and

a third module adapted to allow a developer to integrate data sources within the multi-channel application.

23. (Previously Presented) The system of Claim 22 wherein the runtime system includes:

an application manager that is adapted to run multi-channel applications, to receive requests from clients to access the applications, and to execute the applications in response to the requests; and

a presentation manager that is adapted to detect device types associated with client requests, and to generate output to the clients that is formatted for the detected device types.

Amendments to the Drawings:

The attached sheets of drawings include changes to FIG. 1 on sheet 1, FIG. 2 on sheet 2, FIG. 15 on sheet 15, FIG. 26 on sheet 26, FIG. 29 on sheet 29, FIG. 33 on sheet 33, FIG. 34 on sheet 34, FIG. 38 on sheet 38, and FIG. 40 on sheet 40.

Attachment: Replacement Sheets